

LISTING OF AMENDED CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims.

1. (Currently amended) A computer implemented method of evaluating a plurality of customer records stored in a computer database to identify high value customers to be targeted by a customer retention or reward program, each customer record having at least a first attribute and a second attribute, each of the first attribute and the second attribute having an associated attribute value, the method comprising:
 - a) ~~first assigning a discretized attribute score for each of the attribute values;~~
first sorting the plurality of customer records based on the first attribute and assigning a first discretized attribute to each customer record where the first discretized attribute is based on the sorted rank of the customer record;
 - b) second sorting the plurality of customer records based on the second attribute and assigning a second discretized attribute to each customer record where the second discretized attribute is based on the sorted rank of the customer record;
 - ~~b~~c) ~~first~~ third sorting the plurality of customer records in to an order based on the assigned first discretized attribute scores associated with the first attribute;
 - ~~e~~d) ~~second~~ fourth sorting the ordered plurality of customer records resulting from the third sorting in to an order where the customer records having the same first discretized attribute scores are further sorted based on the assigned second discretized attribute scores associated with the second attribute;
 - ~~d~~e) ~~third~~ fifth sorting the ordered plurality of customer records resulting from the fourth sorting in to an order based on the attribute values associated with at least the first attribute and the second attribute, until customer records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;

- ef) ~~second~~-assigning an evaluation score to each customer record based on the rank of each customer record after the fifth sorting and independent of the discretized attribute scores; which has been sorted; and
- fg) ~~based on the evaluation score, identifying high value customers.~~ identifying the high value customers by selecting the customer records that having the highest assigned evaluation scores.
2. (Currently amended) The method of claim 1, wherein step (a) includes the steps of:
- (i) breaking the sorted plurality of customer records into a number of groups based on the rank of each customer record and its first attribute values; and
 - (ii) for each customer records ~~of each~~ in a group, assigning [[a]]the same first discretized attribute score for the attribute values.
3. (Currently amended) ~~The method of claim 2, further including the step of sorting the plurality of customer records in the order based on the attribute values associated with one of at least the first attribute and the second attribute.~~ The method of claim 1, wherein step (b) includes the steps of:
- (i) breaking the sorted plurality of customer records into a number of groups based on the rank of each customer record and its second attribute value; and
 - (ii) for each customer record in a group, assigning the same second discretized attribute score.
4. (Currently amended) The method of claim 1, wherein step (a) includes the steps of:
- (i) breaking the sorted plurality of customer records into quartiles ~~based on the attribute values associated with one of at least the first attribute and the second attribute; and~~

(ii) for customer records of ~~each~~ the same quartile, assigning one of the scores of 1, 2, 3, and 4 ~~for as the first discretized attribute. attribute values associated with the one of at least the first attribute and the second attribute.~~

5. (Currently amended) The method of claim 1, wherein step ([e])f includes the steps of:

- (i) splitting the customer records, which have been sorted, into a number of groups based on their current ranking; and
- (ii) assigning an evaluation score for the customer records of each group.

6. (Currently amended) The method of claim 1, wherein step ([e])f includes the steps of:

- (i) splitting the customer records, which have been sorted, into 100 groups based on the current ranking of the customer records; and
- (ii) assigning an evaluation score of between 1 and 100 for customer records of each group.

7. (Currently amended) The method of claim 1, wherein step ([d])e is performed until customer records, which have same assigned first and second discretized attribute scores but different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks.

8. (Cancel)

9. (Cancel)

10. (Currently amended) A computer implemented method of evaluating customers in the airline industry in a given period to identify high value customers, the method comprising:

- a) obtaining records of each customer' contribution factors with associated values, the contribution factors including at least net revenue and number of flights;
- ~~b) first assigning a discretized score for each of the associated values;~~
- ~~c) first sorting the records in order based on the assigned discretized scores associated with the net revenue;~~
- ~~d) second sorting the records in order based on the assigned discretized scores associated with the number of flights;~~
- ~~e) third sorting the records in order based on the associated values associated with at least the net revenue and the number of flights, until records, which have different associated values associated with at least the net revenue or the number of flights, have been sorted to different ranks;~~
- ~~f) second assigning an evaluation score to each record which has been sorted;~~
~~and~~
- ~~g) based on the evaluation score, identifying high value customers.~~
- b) storing the records in a database;
- c) first sorting the records based on the first attribute and assigning a first discretized attribute to each record where the first discretized attribute is based on the sorted rank of the record;
- d) second sorting the records based on the second attribute and assigning a second discretized attribute to each record where the second discretized attribute is based on the sorted rank of the record;
- e) third sorting of the records in to an order based on the assigned first discretized attribute scores associated with the first attribute;

- f) forth sorting the ordered records resulting from the third sorting in to an order where the records having the same first discretized attribute scores are further sorted based on the assigned second discretized attribute scores associated with the second attribute;
- g) fifth sorting the ordered records resulting from the forth sorting in to an order based on the attribute values associated with at least the first attribute and the second attribute, until records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;
- h) assigning an evaluation score to each record based on the rank of each record after the fifth sorting and independent of the discretized attribute scores; which has been sorted ; and
- i) based on the evaluation score, identifying high value customers. identifying the high value customers by selecting the records that having the highest assigned evaluation scores.

11. (Currently amended) A computer architecture for evaluating a plurality of customer records stored in a computer database to identify high value customers to be targeted by a customer retention or reward program, each customer record having at least a first attribute and a second attribute, each of the first attribute and the second attribute having an associated attribute value, the computer architecture comprising:

- a) ~~means for first assigning a discretized attribute score for each of the attribute values;~~ first sorting the plurality of customer records based on the first attribute and assigning a first discretized attribute to each customer record where the first discretized attribute is based on the sorted rank of the customer record;
- b) means for second sorting the plurality of customer records based on the second attribute and assigning a second discretized attribute to each customer

record where the second discretized attribute is based on the sorted rank of the customer record;

- b~~c~~) means for ~~first-third~~ sorting the plurality of customer records in order based on the assigned first discretized attribute scores associated with the first attribute;
- e~~d~~) means for ~~second-forth~~ sorting the ordered plurality of customer records resulting from the third sorting in to an order where the customer records having the same first discretized attribute scores are further sorted based on the assigned second discretized attribute scores associated with the second attribute;
- d~~e~~) means for ~~third-fifth~~ sorting the ordered plurality of customer records resulting from the forth sorting in to an order based on the attribute values associated with at least the first attribute and the second attribute, until customer records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;
- e~~f~~) means for ~~second~~ assigning an evaluation score to each customer record based on the rank of each customer record after the fifth sorting and independent of the discretized attribute scores; which has been sorted; and
- f~~g~~) means for ~~using the evaluation score to identify high value customers.~~ identifying the high value customers by selecting the customer records that having the highest assigned evaluation scores.

12. (Currently amended) A computer system for evaluating a plurality of customer records stored in a computer database to identify high value customers to be targeted by a customer retention or reward program, each customer record having at least a first attribute and a second attribute, each of the first attribute and the second attribute having an associated attribute value, the computer system comprising:

a processor; and

a memory coupled to the processor, the memory having stored therein sequences of instructions, which, when executed by the processor, cause the processor to perform the steps of:

~~————— first assigning a discretized attribute score for each of the attribute values;~~

~~————— first sorting the plurality of customer records in order based on the assigned discretized attribute scores associated with the first attribute;~~

~~————— second sorting the plurality of customer records in order based on the assigned discretized attribute scores associated with the second attribute;~~

~~————— third sorting the plurality of customer records in order based on the attribute values associated with at least the first attribute and the second attribute, until records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;~~

~~————— second assigning an evaluation score to each customer record which has been sorted; and~~

~~based on the evaluation score, identifying high value customers.~~

first sorting the plurality of customer records based on the first attribute and assigning a first discretized attribute to each customer record where the first discretized attribute is based on the sorted rank of the customer record;

second sorting the plurality of customer records based on the second attribute and assigning a second discretized attribute to each customer record where the second discretized attribute is based on the sorted rank of the customer record;

third sorting the plurality of customer records in to an order based on the assigned first discretized attribute scores associated with the first attribute;

forth sorting the ordered plurality of customer records resulting from the third sorting in to an order where the customer records having the same first discretized attribute scores are further sorted based on the assigned second discretized attribute scores associated with the second attribute;

fifth sorting the ordered plurality of customer records resulting from the forth sorting in to an order based on the attribute values associated with at least the first attribute and the second attribute, until customer records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;

assigning an evaluation score to each customer record based on the rank of each customer record after the fifth sorting and independent of the discretized attribute scores; and

identifying the high value customers by selecting the customer records that having the highest assigned evaluation scores.

13. (Currently amended) An article, for use in evaluating a plurality of customer records stored in a computer database to identify high value customers to be targeted by a customer retention or reward program, each customer record having at least a first attribute and a second attribute, each of the first attribute and the second attribute having an associated attribute value, the article comprising:

at least one sequence of machine readable instructions in machine readable form,

wherein execution of the instructions by one or more processors causes the one or more processors to perform the steps of:

~~_____ first assigning a discretized attribute score for each of the attribute values;~~

~~————— first sorting the plurality of customer records in order based on the assigned discretized attribute scores associated with the first attribute;~~

~~————— second sorting the plurality of customer records in order based on the assigned discretized attribute scores associated with the second attribute;~~

~~————— third sorting the plurality of records in order based on the attribute values associated with at least the first attribute and the second attribute, until the customer records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;~~

~~————— second assigning an evaluation score to each customer record which has been sorted; and~~

~~————— Based on the evaluation score, identifying high value customers.~~

first sorting the plurality of customer records based on the first attribute and assigning a first discretized attribute to each customer record where the first discretized attribute is based on the sorted rank of the customer record;

second sorting the plurality of customer records based on the second attribute and assigning a second discretized attribute to each customer record where the second discretized attribute is based on the sorted rank of the customer record;

third sorting the plurality of customer records in to an order based on the assigned first discretized attribute scores associated with the first attribute;

forth sorting the ordered plurality of customer records resulting from the third sorting in to an order where the customer records having the same first discretized attribute scores are further sorted based on the assigned second discretized attribute scores associated with the second attribute;

fifth sorting the ordered plurality of customer records resulting from the forth sorting in to an order based on the attribute values

associated with at least the first attribute and the second attribute, until customer records, which have different attribute values associated with at least the first attribute or the second attribute, have been sorted to different ranks;

assigning an evaluation score to each customer record based on the rank of each customer record after the fifth sorting and independent of the discretized attribute scores; and

identifying the high value customers by selecting the customer records that having the highest assigned evaluation scores.

14. (New) The method of claim 1, wherein step (b) includes the steps of:

- (i) breaking the sorted plurality of customer records into quartiles; and
- (ii) for customer records of the same quartile, assigning one of the scores of 1, 2, 3, and 4 as the second discretized attribute.

15. (New) The method of claim 1, where the first attribute includes the revenue generated by the customer.

16 (New) The method of claim 1, where the second attribute includes the number of purchases made by the customer.